# modern casting

# 1983 EDITORIAL INDEX

## JANUARY-DECEMBER 1983 / VOL 73

New Technology — Market Opportunities — Management in Action — Technology for Progress — Operations for Profit — Plant Tours — International Technology. In 1983 over 63 individual authors communicated their know-how to the metalcasting industry in more than 267 pages of MODERN CASTING feature articles.



Published by

American Foundrymen's Society

Golf and Wolf Roads, Des Plaines, IL 60016

**AFS CASTING CONGRESS** 

Casting Congress Technical Review Part 2 Jul, p 26 Casting Congress Technical Review Part 3 Aug, p 40

Foundrymen Look to Advanced Technology

Jun, p 34-36 Industry Issues Focus of 87th Casting Congress

Mar, p 10

Preparing Today for Tomorrow's Foundry Apr. p 33-34

**AFS REGIONAL CONFERENCES** 

Canadian Foundrymen Emphasize People, **Productivity and Profit** Dec, p 41 Conference Prepares Foundrymen for Industry Comeback Apr, p 46

NE Casters Encouraged to Improve Practices Despite Uncertain Economy Feb, p 32

Optimism and Faith in the Future Expressed by Foundrymen May, p 40

Southeastern Chapters Hold 51st Consecutive Conference Mar, p 34

AFS/CMI

**AFS Board Takes Action on Society** Management Sep, p 13 Green Sand Molding: A Review for the Future Robin Bailey, May, p 31-34

AIR POLLUTION CONTROL

\$4 Million Baghouse Goes On-Line at Deere Jan. p 300 Environmental Permitting and Its Effect on Plant Shutdowns

Russell S. Frye, Paul W. Casper, Jr., Aug, p 28-29

Glasses Magnetically Divert Ferrous Dust Aug, p 48 Scrubbing Cupola Gases with Increased

Efficiency F. M. Degner, Dec, p 24-25

**ALLOY CASTINGS (See Also Specific Type)** 

Improving Casting Properties and Integrity with Hot Isostatic Processing E. L. Rooy, Dec, p 18-20

**ALUMINUM BASE ALLOYS** 

Air Force Targets Aluminum Castings for Structural Parts Jun, p 39-40 Cupro-Nickel Casting Results from Innovative Design

Jun, p 41 Detecting Hydrogen Gas in Aluminum

Lawrence P. Semersky, Aug, p 38-39 The Function of Risers and Chills in Casting Aluminum

Nov, p 54

Instrument Measures Hydrogen in Aluminum Jun, p 54A

Quality Through Testing Part 2 - Metal D. P. Kanicki, E. L. Kotzin, R. W. Lobenhofer, Jul. p 18-21

The Reduction of Inclusions in Aluminum by Filtration D. E. Groteke, Apr, p 25-27

The Status of Critical Foundry Materials-1983 Jun. p 26-28

AMERICAN FOUNDRYMEN'S SOCIETY

The State of AFS and the Industry Eugene E. Paul, Jun, p 17-18

ANALYSIS

Maintenance Troubleshooting Job Safety **Analysis** Sep, p 43-44

ANNEALING

The Annealing of Cast Iron Sep, p 46-47

Fluidized Bed Heat Treating and its Applications in the Foundry Carol A. Girrell, Dec, p 26-28

Spheroidizing Treatment for Ductile Iron Jun, p 32-33

AOD

**AOD Refractory Performance at Wisconsin** D. A. Whitworth, E. A. Hall, Jan, p 25-27 AOD and Refractories are Major Interests for

Steel Casting Producers Aug, p 40-41

Desulfurizing Acid and Basic Steel Nick Wukovich, Sep, p 38-41

APPLICATIONS

Fluidized Bed Heat Treating and Its Applications in the Foundry Carol A. Girrell, Dec, p 26-28 Getting an I.E. Program Started in Your

Foundry

D. P. Henry, Jan, p 22-24 The Industrial Engineer's Role in Justifying Capital Expenditures

Donald J. Huss, Apr, p 28-30 Industrial Engineering Applications in the **Foundry Organization** D. J. Gentile, Feb, p 22-24

Industrial Engineering in Large Foundry **Organizations** Charles Wargel, Mar, p 22-23

The Role of the Industrial Engineer in the **Decades Ahead** C. A. Brautigam, D. P. Brautigam, May, p 27-30

**ARC FURNACES** 

**Developments in Arc Furnace Melting** John W. Wasem, Feb, p 16-18

AUTOMATION

**Automated Design of Solid Components** Ernest Mazzatenta, Sep, p 32-33 Automatic Counter Gravity Castings of Shell Molds G. D. Chandley, Oct, p 29-31

**BLAST CLEANING** 

Principles of Centrifugal Blast Machines Eugene Tarabek, Feb, p 28-30 Understanding Shot Peening: A Case History Gregory A. Fett, Jun, p 29-31

BUYERS DIRECTORY

1984 Buyers' Guide Issue Nov, p 1BD-104

**BUYING (PURCHASING)** 

Trends in Foundry Purchasing Management Robin Bailey, Nov, p 48-49

**CASE HISTORIES** 

Brea Alloys' Reclamation Unit Mar. p 31 **Developments in Arc Furnace Melting** John W. Wasem, Feb, p 16-18

Disamatics, Key to Three Modernization **Programs** Feb, p 35A

**Duraloy Blaw-Knox Installs V-Process Molding** System Apr, p 52A

Foundry Bucks Recession by Capitalizing on Zinc Casting Alloy Jul, p 53

Industrial Engineering Applications in the **Foundry Organization** D. J. Gentile, Feb, p 22-24

**New Thermal Analysis Instrument Aids Casting Procedures** Nov, p 166

Polyurethane Patterns Cut Costs for George Fischer Mar, p 38A

Southern Foundries Find Flexibility with Coreless Melters May, p 44-45

Understanding Shot Peening: A Case History Gregory A. Fett, Jun, p 29-31

**CAST FACTS** 

The Annealing of Cast Iron Sep, p 46-47

Base Iron Preparation for Ductile Iron May, p 37-38

Charge Materials for Ductile Iron Apr, p 32A

Desirable Physical Characteristics for Cupola Scrap Dec, p 39

Detecting Hydrogen Gas in Aluminum Lawrence P. Semersky, Aug, p 38-39 **Ductile Iron Inoculation Practice** 

Jul, p 49 Factors Influencing Inoculation

Oct, p 48 The Function of Risers and Chills in Casting Aluminum

Nov, p 54 Spheroidizing Treatment for Ductile Iron

Jun, p 32-33

CAST IRON (See Also Specific Type) 17th Census of World Casting Production-Dec, p 22-23

1982 Flow of Iron in the U.S.A. Dec, p 32-33

The Annealing of Cast Iron Sep, p 46-47

Castings Facing Slow Comeback; Foundry **Equipment Down Again** Robert A. Ricciuti, Feb, p 25-27

Quality Through Testing Part 2 - Metal D. P. Kanicki, E. L. Kotzin, R. W. Lobenhofer, Jul, p 18-21

Researchers Taking Close Look at CG Iron Aug, p 45

A Technique for Retaining Graphite in Cast Irons During Polishing W. U. Ahmed, L. J. Gawlick, Jan, p 20-21

**CASTING** (General)

**Automatic Counter Gravity Casting of Shell** G. D. Chandley, Oct, p 29-31

**CG IRON** 

Researchers Taking Close Look at CG Iron Aug, p 45

**CHARGE MATERIALS** (See Also Specific Type) 1982 Flow of Iron in the U.S.A. Dec, p 32-33

Charge Materials for Ductile Iron Apr, p 32A

Desulfurizing Acid and Basic Steels Nick Wukovich, Oct, p 34-37

## CHEMICAL ANALYSIS

Charge Materials for Ductile Iron Apr. p 32A Quality Through Testing Part 2 – Metal D. P. Kanicki, E. L. Kotzin, R. W. Lobenhofer, Jul, p 18-21

CHEMICALLY BONDED SAND

(See Also Specific Type)
Coldshell Cores Make Debut at Hayes-Albion

David P. Kanicki, Jul, p 24-25 An Economical Approach to Sand Reclamation John H. Morgan, Peter E. Macler, Feb, p 19-21

Green Sand Reclamation Considered Growing

Jul, p 28-29

New Reclaimer Unit Combines Shakeout, Reclaim, Classifying Jul, p 54B

Quality Through Testing Part 1 – Sand Robin Bailey, Jun, p 19-22

Reclaiming Sodium Silicate Bonded Sand at Brea Alloys Ken Shahan, Tom Cobett, Mar, p 30-31

Small Foundry Prepares for the Future Robin Bailey, Aug, p 26-27

CLEANING & FINISHING

(See Also Specific Type)
High Pressure Water: One Method for Cleaning
Castings
Feb. p. 35

Improving Cleaning Room Productivity Norris Luther, Aug, p 17-22

Principles of Centrifugal Blast Machines Eugene Tarabek, Feb, p 28-30

Understanding Shot Peening: A Case History Gregory A. Fett, Jun, p 29-31 Using Coated Abrasive Belts in High Pressure

Using Coated Abrasive Belts in High Pr Grinding Applications Anthony Russo, May, p 24-26

## COATED ABRASIVES

Using Coated Abrasive Belts in High Pressure Grinding Applications Anthony Russo, May, p 24-26

#### COKE

Cupola Melters Taking a Hard Look at Coke and Costs Aug, p 44-45 The Status of Critical Foundry Materials – 1983 Jun, p 26-28

**COLDBOX PROCESS** 

Coldshell Cores Make Debut at Hayes-Albion David P. Kanicki, Jul, p 24-25 Corebox Rigging for the Coldbox Process Richard M. Ovestrud, Sep, p 34-37 Curing Materials and Equipment for the Coldbox Process Richard M. Ovestrud. Oct. p 38-40

COMPUTER APPLICATIONS

Automated Design of Solid Components Ernest Mazzatenta, Sep, p 32-33 Breakthrough in Maintenance Management Jul, p 53A

British Trends in Heat Treatment Eric Ford, May, p 35-36 Casting Quality Starts With Quality Patterns

Jul, p 26-27

Computer Simulation Reveals Maintenance Efficiencies Aug. p 41

Computerized Sand Control Gary R. Strong, Mar, p 18-21

Consight/Magsight William E. Willis, Sep, p 18-20

Development of Foundry Computer Based Systems Continuing Jun, p 40-41

Foundry Research Stresses Advanced Computer Techniques Jul, p 27-28

Green Sand Molding: A Review for the Future Robin Bailey, May, p 31-34 Microcomputers and Programs for Foundry

Microcomputers and Programs for Foundry Calculations

Rudolf Sillen, Aug, p 35-37

Programmable Controller Added to Molding Machines

Jun, p 54D

What Every Foundryman Needs to Know About Computers Part 1

Dr. R. M. Kotschi, M. L. Kotschi, Oct, p 41-43 What Every Foundryman Needs to Know About Computers Part 2

Dr. R. M. Kotschi, M. L. Kotschi, Nov, p 44-47 What Every Foundryman Needs to Know About Computers Part 3

Dr. R. M. Kotschi, M. L. Kotschi, Dec, p 34-37

#### CONSULTANTS

1983 Directory of Metalcasting and Foundry Consultants Jul, p 1A-16A Consultants and Their Use Marvin Schwenzer, Jul, p 30-32

#### **CONTINUOUS CASTING**

Superior Graphite Completes Trial Run for Continuous Production of Silicon Carbide Nov, p 166A

#### COPPER BASE ALLOYS

Cupro-Nickel Casting Results from Innovative Design Jun, p 41

New Copper-Base Alloy Provides Lower Lead Levels Jul, p 55

The Status of Critical Foundry Materials – 1983 Jun, p 26-28

## COREBOXES

Casting Quality Starts with Quality Patterns Jul, p 26-27

The Cleaning of Pattern Tooling: Benefit or Evil William G. Gabelhausen, Dec, p 29-31 Coldshell Cores Make Debut at Hayes-Albion

David P. Kanicki, Jul, p 24-25

Corebox Rigging for the Coldbox Process

Richard M. Ovestrud, Sep, p 34-37 Curing Materials and Equipment for the Coldbox Process

Richard M. Ovestrud, Oct, p 38-40 Metallic Coatings for Patterns and Coreboxes

J. R. Henry, Apr, p 22-24 New Copper-Base Alloy Provides Lower Lead Levels

Plastic Patterns for High Pressure Molding Roger Brown, Nov, p 41-43

## **CORES & COREMAKING**

Coldshell Cores Make Debut at Hayes-Albion David P. Kanicki, Jul, p 24-25 Core Finisher Machine Eliminates Core Fins Dec, p 46B Corebox Rigging for the Coldbox Process Richard M. Ovestrud, Sep, p 34-37

Curing Materials and Equipment for the Coldbox Process Richard M. Ovestrud, Oct, p 38-40

The HMP System: A New Idea in

Patternmaking Robin Bailey, Jul, p 22-23

Reclaiming Clay Bonded Sand for Coreroom Use

Mark Ruzbehi, Dieter S. Leidel, Sep, p 21-24

#### COST REDUCTION

Automatic Counter Gravity Casting of Shell Molds G. D. Chandley, Oct, p 29-31

British Trends in Heat Treatment Eric Ford, May, p 35-36

Casting Quality Starts With Quality Patterns Jul, p 26-27

Cupola Melters Taking a Hard Look at Coke and Costs Aug, p 44-45

Desulfurizing Acid and Basic Steel
Nick Wukovich, Sep, p 38-41

Improving Cleaning Room Productivity
Norris Luther, Aug, p 17-22
The Industrial Engineer's Role in Institute Ins

The Industrial Engineer's Role in Justifying Capital Expenditures Donald J. Huss, Apr, p 28-30

Industrial Engineering in Large Foundry Organizations Charles Wargel, Mar, p 22-23

Charles Wargel, Mar, p 22-23 Plastic Patterns for High Pressure Molding Roger Brown, Nov, p 41-43

Principles of Centrifugal Blast Machines Eugene Tarabek, Feb, p 28-30

#### COSTING

The Industrial Engineer's Role in Justifying Capital Expenditures Donald J. Huss, Apr, p 28-30

#### **COVER STORIES**

1983: An Economic Shell Game David P. Kanicki, Jan, p 16-19 Computerized Sand Control

Gary R. Strong, Mar, p 18-21 Consight/Magsight

William E. Willis, Sep, p 18-20 Developments in Arc Furnace Melting John W. Wasem, Feb, p 16-18

Forecasting the Ductile Iron Industry Real Gratton, Oct, p 20-23

Green Sand Molding: A Review for the Future Robin Bailey, May, p 31-34

Improving Casting Properties and Integrity With Hot Isostatic Processing E. L. Rooy, Dec, p 18-20

Improving Cleaning Room Productivity Norris Luther, Aug, p 17-22 Pacific Southern Foundries: "Building In"

Pacific Southern Foundries: "Building In Casting Quality Stan Blomberg, Jul, p 14-17

Preparing Today for Tomorrow's Foundry Apr, p 33-34

## CUPOLA

Cupola Melters Takiny a Hard Look at Coke and Costs Aug, p 44-45 Desirable Physical Characteristics for Cupola Scrap Dec, p 39

#### DEFECTS

The Reduction of Inclusions in Aluminum by Filtration
D. E. Groteke, Apr, p 25-27

DESULFURIZATION

Desulfurizing Acid and Basic Steels Nick Wukovich, Oct, p 34-37 Desulfurizing Acid and Basic Steel Nick Wukovich, Sep, p 38-41

DIECASTING

Aluminum Pump Designed for Permanent Mold Foundries Mar, p 38C

**DUCTILE (NODULAR) IRON** 

17th Census of World Casting Production – 1982 Dec, p 22-23

Base Iron Preparation for Ductile Iron

May, p 37-38 Casting Congress Technical Review Part 1 Jun, p 37-39

Castings Facing Slow Comeback; Foundry Equipment Down Again Robert A. Ricciuti, Feb, p 25-27 Charge Materials for Ductile Iron

Apr, p 32A

Ductile Iron Inoculation Practice Jul, p 49

Forecasting the Ductile Iron Industry Real Gratton, Oct, p 20-23 Holding and Pouring of Magnesium-Treated

Cast Iron Erwin Dotsch, Werner Mainz, Mar, p 24-26 Kulp Foundry Finding Success with Ductile Iron

Robert L. Hachtman Jr., Oct, p 24-27 Quality Through Testing Part 2 – Metal D. P. Kanicki, E. L. Kotzin, R. W. Lobenhofer

Jul, p 18-21 Spheroidizing Treatment for Ductile Iron Jun, p 32-33

A Technique for Retaining Graphite in Cast Irons During Polishing W. U. Ahmed, L. J. Gawlick, Jan, p 20-21

**ELECTROSLAG PROCESS** 

Foundry Research Stresses Advanced Computer Techniques Jul, p 27-28

ENERGY

British Trends in Heat Treatment Eric Ford, May, p 35-36 Cupola Melters Taking a Hard Look at Coke and Costs Aug, p 44-45

Scrubbing Cupola Gases With Increased Efficiency

F. M. Degner, Dec, p 24-25

ENVIRONMENTAL CONTROL (See Also Specific Type)

\$4 Million Baghouse Goes On-Line at Deere Jan, p 30C

Casting Congress Technical Review Part 3 Aug, p 40

Environmental Issues Remain a Major Industry Concern

Aug, p 42-43 Environmental Permitting and Its Effect on Plant Shutdowns

Russell S. Frye, Paul W. Casper Jr., Aug, p 28-29

New Copper-Base Alloy Provides Lower Lead Levels Jul. p 55

PCB Regulations: Their Effect on the Foundry Industry Russell S. Frye, May, p 21-23

Scrubbing Cupola Gases with Increased Efficiency F. M. Degner, Dec, p 24-25 Smokestacks and the Credibility Gap David P. Kanicki, May, p 17

FILTRATION

The Reduction of Inclusions in Aluminum by Filtration D. E. Groteke, Apr, p 25-27

**FLASKLESS MOLDING** 

Disamatics, Key to Three Modernization Programs Feb, p 35A Programmable Controller Added to Molding Machines Jun, p 54D SSK Offering New C&D Rotary Flaskless Unit Feb, p 35B

FORECAST & TRENDS

1983: An Economic Shell Game David P. Kanicki, Jan, p 16-19 Forecasting the Ductile Iron Industry Real Gratton, Oct, p 20-23

**FOUNDRY TECHNOLOGY (General)** 

British Trends in Heat Treatment Eric Ford, May, p 35-36 Casting Congress Technical Review Part 2 Jul, p 26 Centralized Ladle Heating System Planned for Foundry Industry

Apr, p 52 Coldshell Cores Make Debut at Hayes-Albion David P. Kanicki, Jul, p 24-25

Computerized Sand Control Gary R. Strong, Mar, p 18-21 Developments in Arc Furnace Melting John W. Wasem, Feb, p 16-18

John W. Wasen, Peo, p 10-10
An Economical Approach to Sand Reclamation
John H. Morgan, Peter E. Macler,
Feb, p 19-21

Foundrymen Look to Advanced Technology Jun, p 34-36

Green Sand Molding: A Review for the Future Robin Bailey, May p 31-34 The HMP System: A New Idea in

The HMP System: A New Idea in Patternmaking

Robin Bailey, Jul, p 22-23 Holding and Pouring of Magnesium-Treated Cast Iron

Erwin Dotsch, Werner Mainz, Mar, p 24-26 Impact Molding: A New Concept in Green Sand Compaction

Donald J. Berant, Sep, p 28-29

Kulp Foundry Finding Success with Ductile Iron Robert L. Hachtman Jr., Oct, p 24-27 Ladle Injection System Designed for Foundries

Jan, p 30B Metallic Coatings for Patterns and Coreboxes

J. R. Henry, Apr, p 22-24

Microcomputers and Programs for Foundry
Calculations

Rudolf Sillen, Aug, p 35-37

Plastic Patterns for High Pressure Molding Roger Brown, Nov, p 41-43

Recent Developments in Casting Extraction Michael J. DeLuca, Fred Degner, Nov, p 34-37

The Reduction of Inclusions in Aluminum by Filtration

D. E. Groteke, Apr, p 25-27 Understanding Shot Peening: A Case History Gregory A. Fett, Jun, p 29-31

FROM THE EDITOR

. . Or Forever Hold Your Peace David P. Kanicki, Feb, p 15 Are There Limits to Quality? David P. Kanicki, Mar, p 17 A Giant Step for Fair Trade David P. Kanicki, Jul, p 13 It's Time To Help Ourselves David P. Kanicki, Aug, p 15 Just a Gut Feeling David P. Kanicki, Oct, p 7 MC and Our Changing Industry David P. Kanicki, Sep, p 7 Smokestacks and the Credibility Gap David P. Kanicki, May, p 17 Some Thoughts for 1983 David P. Kanicki, Jan, p 15 The State of AFS and the Industry Eugene E. Paul, Jun, p 17-18 The Tough Road Back David P. Kanicki, Nov, p 7 What Business Are You In? David P. Kanicki, Apr, p 17 You Can't Get There From Here

**FURNACES (See Also Specific Type)** 

AOD and Refractories are Major Interests for Steel Casting Producers Aug, p 40-41 British Trends in Heat Treatment

Eric Ford, May, p 35-36

David P. Kanicki, Dec. p 7

Fluidized Bed Heat Treating and Its Applications in the Foundry Carol A. Girrell, Dec, p 26-28

Holding and Pouring of Magnesium-Treated
Cast Iron

Erwin Dotsch, Werner Mainz, Mar, p 24-26 Microprocessor Control Added to Fluidized Bed Furnace Line Jun. p 54B

GATING

Casting Congress Technical Review Part 1 Jun, p 37-39

**GOVERNMENT REGULATIONS** 

... Or Forever Hold Your Peace David P. Kanicki, Feb, p 15

Environmental Permitting and Its Effect on Plant Shutdowns Russell S. Frye, Paul W. Casper Jr.,

Aug, p 28-29
PC3 Regulations: Their Effect on the Foundry

Industry
Russell S. Frye, May, p 21-23

Zero Discharge: The Next Environmental Hurdle Martha Siebel, Aug, p 32-34

**GRAY IRON** 

17th Census of World Casting Production --1982 Dec, p 22-23

Casting Congress Technical Review Part 3
Aug, p 40

Castings Facing Slow Comeback; Foundry Equipment Down Again Robert A. Ricciuti, Feb, p 25-27

Kulp Foundry Finding Success with Ductile Iron Robert L. Hachtman Jr., Oct, p 24-27

Research Investigating Alloying Elements Aug, p 43-44

A Technique for Retaining Graphite in Cast Irons During Polishing W. U. Ahmed, L. J. Gawlick, Jan, p 20-21

GRINDING

Environmental Issues Remain a Major Industry Concern Aug, p 42-43 Improving Cleaning Room Productivity Norris Luther, Aug, p 17-22 Using Coated Abrasive Belts in High Pressure Grinding Applications Anthony Russo, May, p 24-26

#### **HEAT TRANSFER**

Foundry Research Stresses Advanced Computer Techniques Jul, p 27-28

#### **HEAT TREATING**

AOD and Refractories are Major Interests for Steel Casting Producers Aug, p 40-41

The Annealing of Cast Iron Sep, p 46-47

Base Iron Preparation for Ductile Iron May, p 37-38

British Trends in Heat Treatment Eric Ford, May, p 35-36

Casting Congress Technical Review Part 1 Jun, p 37-39

Fluidized Bed Heat Treating and Its Applications in the Foundry Carol A. Girrell, Dec, p 26-28

Improved Heat Release with New Insulation/ Heating Modules Jul, p 54A

A Process for Deoxidizing Acid Melted Carbon Steel

Lev Gindin, Mar, p 27-29 Research Investigating Alloying Elements Aug, p 43-44

#### HIP

AOD and Refractories are Major Interests for Steel Casting Producers Aug, p 40-41 Hot Isostatic Presses Designed for High

Productivity Aug, p 48B

Improving Casting Properties and Integrity with Hot Isostatic Processing

E. L. Rooy, Dec, p 18-20 New Vessel Adds to IMT's HIPping Capabilities Oct, p 55A

Plastic Patterns for High Pressure Molding Roger Brown, Nov, p 41-43

#### HMP PROCESS

The HMP System: A New Idea in Patternmaking Robin Bailey, Jul, p 22-23

#### IMPORTS

Castings Facing Slow Cometrack; Foundry Equipment Down Again Robert A. Ricciuti, Feb, p 25-27 A Giant Step for Fair Trade David P. Kanicki, Jul, p 13

## INDUSTRIAL ENGINEERING

Computer Simulation Reveals Maintenance Efficiencies Aug, p 41

Getting an I.E. Program Started in Your Foundry

D. P. Hénry, Jan, p 22-24
The Industrial Engineer's Role in Justifying
Capital Expenditures
Donald J. Huss, Apr, p 28-30
Industrial Engineering Applications in the

Foundry Organization
D. J. Gentile, Feb, p 22-24
Industrial Engineering in Large Foundry

Organizations Charles Wargel, Mar, p 22-23 The Role of the Industrial Engineer in the Decades Ahead C. A. Brautigam, D. P. Brautigam, May, p 27-30

## INDUCTION FURNACES

Dry Vibrate. Linings for Induction Melting Ronald A. Stark, Nov, p 38-40 Southern Foundries Find Flexibility with Coreless Melters May, p 44-45

#### **INMOLD PROCESS**

Researchers Taking Close Look at CG Iron Aug, p 45

#### INOCULATION

Ductile Iron Inoculation Practice Jul, p 49 Factors Influencing Inoculation Oct, p 48

# INTERNATIONAL FOUNDRY CONGRESS Egypt Beckons Foundrymen

gypt Beckons Foundrym Apr, p 12

#### INVESTMENT CASTING

Using Coated Abrasive Belts in High Pressure Grinding Applications Anthony Russo, May, p 24-26 Waukesha's Investment Casting Plant Forecasts Future of Foundry Industry Sep, p 25-27

#### LABOR/MANAGEMENT RELATIONS

Avoiding Damage Suits From Employee Terminations Matthew Goodfellow, Aug, p 30-31

#### LADLE PRACTICE

AOD and Refractories are Major Interests for Steel Casting Producers Aug, p 40-41

Centralized Ladle Heating System Planned for Foundry Industry Apr, p 52

Desulfurizing Acid and Basic Steels Nick Wukovich, Oct, p 34-37

Ladle Injection System Designed for Foundries Jan, p 30B

Universal Castings Installs Electrically Heated Ladle Jan, p 30A

#### MACHINING

The Reduction of Inclusions in Aluminum by Filtration D. E. Groteke, Apr, p 25-27 Using Coated Abrasive Belts in High Pressure Grinding Applications Anthony Russo, May, p 24-26

#### MAGNESIUM

17th Census of World Casting Production – 1982 Dec, p 22-23 Holding and Pouring of Magnesium-Treated Cast Iron Erwin Dotsch, Werner Mainz, Mar, p 24-26 New Pressure Sealed Ladle by Modern Jun, p 54A Spheroidzing Treatment for Ductile Iron Jun, p 32-33

## MAGNESIUM TREATMENT

Ductile Iron Inoculation Practice Jul, p 49 Holding and Pouring of Magnesium-Treated Cast Iron Erwin Dotsch, Werner Mainz, Mar, p 24-26

#### MAINTENANCE

Breakthrough in Maintenance Management Jul, p 53A

Casting Congress Technical Review Part 3
Aug, p 40

The Cleaning of Pattern Tooling: Benefit or Evil William G. Gabelhausen, Dec, p 29-31 Computer Simulation Reveals Maintenance

Efficiencies Aug, p 41

Maintenance Troubleshooting Job Safety Analysis Sep, p 43-44

PCB Regulations: Their Effect on the Foundry Industry Russell S. Frye, May, p 21-23

#### MALLEABLE IRON

17th Census of World Casting Production -1982 Dec, p 22-23

Castings Facing Slow Comeback; Foundry Equipment Down Again Robert A. Ricciuti, Feb, p 25-27

#### MANAGEMENT

Avoiding Damage Suits From Employee Terminations Matthew Goodfellow, Aug, p 39-31 Breakthrough in Maintenance Management

Breakthrough in Maintenance Managemen Jul, p 53A Castings Facing Slow Comeback; Foundry

Equipment Down Again Robert A. Ricciuti, Feb, p 25-27 Consultants and Their Use

Marvin Schwenzer, Jul, p 30-32

Environmental Permitting and Its Effect on Plant Shutdowns Russel S. Frye, Paul W. Casper Jr., Aug. p 28-29

Getting an I.E. Program Started in Your Foundry

D. P. Henry, Jan, p 22-24
The Industrial Engineer's Role in Justifying
Capital Expenditures

Donald J. Huss, Apr, p 28-30 Industrial Engineering Applications in the Foundry Organization

D. J. Gentile, Feb, p 22-24 Industrial Engineering in Large Foundry Organizations

Charles Wargel, Mar, p 22-23 Is an Industrial Hygiene Program Cost Effective? Nov, p 51-52

KMS: A Proven Approach to Process Control David P. Kanicki, Mar, p 32

Maintenance Troubleshooting Job Safety Analysis Sep, p 43-44

PCB Regulations: Their Effect on the Foundry Industry Russell S. Frye, May, p 21-23

Pacific Southern Foundries: "Building In" Casting Quality Stan Blomberg, Jul, p 14-17

Protecting Your Foundry from Fire Oct, p 45

Quality at Lynchburg: A Way of Life William S. Williams, Apr, p 18-21

The Role of the Industrial Engineer in the Decades Ahead
C. A. Brautigam, D. P. Brautigam,

C. A. Brautigam, D. P. Brautigam, May, p 27-30

Small Foundry Prepares for the Future Robin Bailey, Aug, p 26-27 Statistical Quality Control in the Foundry –

Part 1

Archibald Jamieson, May, p 18-20 Statistical Quality Control in the Foundry – Part 2

Archibald Jamieson, Jun, p 23-25

The Status of Critical Foundry Materials – 1983 Jun, p 26-28

Trends in Foundry Purchasing Management Robin Bailey, Nov, p 48-49

What Every Foundryman Needs to Know About Computers Part 1 Dr. R. M. Kotschi, M. L. Kotschi,

Oct, p 41-43
What Every Foundryman Needs to Know About
Computers Part 2

Dr. R. M. Kotschi, M. L. Kotschi, Nov, p 44-47

What Every Foundryman Needs to Know About

Computers Part 3 Dr. Ronald M. Kotschi, Dec, p 34-37 Zero Discharge: The Next Environmental

Hurdle Martha Siebel, Aug. p 32-34

#### MARKETING

What Business are You In? David P. Kanicki, Apr, p 17

## MATERIALS HANDLING

Manipulators Enable Eljer to Improve Efficiency, Quality Sep, p 56B

#### **MECHANICAL PROPERTIES**

Improving Casting Properties and Integrity with Hot Isostatic Processing E. L. Rooy, Dec. p 18-20 The Reduction of Inclusions in Aluminum by Filtration D. E. Groteke, Apr. p 25-27

## MELTING PRACTICES

AOD and Refractories are Major Interests for Steel Casting Producers Aug, p 40-41

Base Iron Preparation for Ductile Iron May, p 37-38

Casting Congress Technical Review Part 3 Aug, p 40

Cupola Melters Taking a Hard Look at Coke and Costs Aug. p 44-45

Desulfurizing Acid and Basic Steels Nick Wukovich, Oct, p 34-37 Desulfurizing Acid and Basic Steel

Nick Wukovich, Sep, p 38-41 Developments in Arc Furnace Melting

John W. Wasem, Feb, p 16-18 Dry Vibrated Linings for Induction Melting Ronald A. Stark, Nov, p 38-40

Lake Shore Foundry Takes the Gamble Robin Bailey, Sep. p 30-31

The Reduction of Inclusions in Aluminum by Filtration

D. E. Groteke, Apr, p 25-27
Table Top Electric Furnace Offers Versatility in Melting

Apr, p 52B

#### **METALLIC COATINGS**

Metallic Coatings for Patterns and Coreboxes J. R. Henry, Apr, p 22-24

#### **METALLOGRAPHY & MICROSTRUCTURES**

A Technique for Retaining Graphite in Cast Irons During Polishing W. U. Ahmed, L. J. Gawlick, Jan, p 20-21

#### METALLURGY

A Process for Deoxidizing Acid Melted Carbon Steel Lev Gindin, Mar, p 27-29

#### MOLD MATERIALS

Green Sand Reclamation Considered Growing Issue Jul, p 28-29 The HMP System: A New Idea in Patternmaking Robin Bailey. Jul. p 22-23

#### MOLD PUNCHOUT

Summit Foundry Systems Offers Hydraulic Mold Punchout Apr, p 52C

#### MOLDING

Green Sand Molding: A Review for the Future Robin Bailey, May, p 31-34 Impact Molding: A New Concept in Green Sand Compaction Donald J. Berant, Sep, p 28-29 Lake Shore Foundry Takes the Gamble Robin Bailey, Sep, p 30-31 Recent Developments in Casting Extraction Michael J. DeLuca, Fred Degner, Nov, p 34-37

#### **NICKEL ALLOYS**

Research Investigating Alloying Elements Aug, p 43-44 The Status of Critical Foundry Materials – 1983 Jun, p 26-28

#### NOISE ABATEMENT

Environmental Issues Remain a Major Industry Concern Aug, p 42-43

#### NONDESTRUCTIVE TESTING

Air Force Targets Aluminum Castings for Structural Parts Jun, p 39-40 Quality Through Testing Part 3 – Metal D. P. Kanicki, E. L. Kotzin, R. W. Lobenhofer, Aug. p 23-25

#### **NONFERROUS (Other Materials)**

Castings Facing Slow Comeback; Foundry Equipment Down Again Robert A. Ricciuti, Feb, p 25-27 Using Coated Abrasive Belts in High Pressure Grinding Applications Anthony Russo. May, p 24-26

#### OII SAND

Reclaiming Sodium Silicate Bonded Sand at Brea Alloys Ken Shahan, Tom Cobett, Mar, p 30-31

#### **OPERATIONAL RESEARCH**

A Process for Deoxidizing Acid Melted Carbon Steel Lev Gindin, Mar, p 27-29 Using Coated Abrasive Belts in High Pressure Grinding Applications Anthony Russo, May, p 24-26

#### PATTERNS & PATTERNMAKING

Casting Quality Starts With Quality Patterns Jul, p 26-27 The Cleaning of Pattern Tooling: Benefit or Evil William G. Gabelhausen, Dec, p 29-31 The HMP System: A New Idea in Patternmaking Robin Bailey, Jul, p 22-23 Metallic Coatings for Patterns and Coreboxes J. R. Henry, Apr, p 22-24 Plastic Patterns for High Pressure Molding

Roger Brown, Nov, p 41-43
Polyurethane Patterns Cut Costs for George
Fischer

Mar, p 38A

Urethane System Reduces Cost of Foundry Patterns Jan. p 30

#### PERMANENT MOLD CASTING

E. L. Roov, Dec. p 18-20

Aluminum Pump Designed for Permanent Mold Foundries Mar, p 38C Improving Casting Properties and Integrity with Hot Isostatic Processing

#### PIG IRON

1982 Flow of Iron in the U.S.A. Dec, p 32-33 The Status of Critical Foundry Materials – 1983 Jun, p 26-28

#### PLANT DESCRIPTION

AOD Refractory Performance at Wisconsin Centrifugal D. A. Whitworth, E. A. Hall, Jan, p 25-27 Brea Allovs' Reclamation Unit

Brea Alloys' Reclamation Unit Mar, p 31

Kulp Foundry Finding Success with Ductile Iron Robert L. Hachtman Jr., Oct, p 24-27 Lake Shore Foundry Takes the Gamble Robin Bailey, Sep, p 30-31

Quality at Lynchburg: A Way of Life William S. Williams, Apr, p 18-21

Small Foundry Prepares for the Future Robin Bailey, Aug, p 26-27 Waukesha's Investment Casting Plant Forecasts Future of Foundry Industry

#### PLANT ENGINEERING

Sep. p 25-27

Environmental Issues Remain a Major Industry Concern Aug, p 42-43

## PLANT LAYOUT & MATERIAL FLOW

Industrial Engineering Applications in the Foundry Organization D. J. Gentile, Feb, p 22-24

## PLASTICS

Casting Quality Starts With Quality Patterns Jul, p 26-27

#### POLLUTION CONTROL (See Also Air & Water)

Cupola Melters Taking a Hard Look at Coke and Costs Aug, p 44-45

Environmental Permitting and Its Effect on Plant Shutdowns Russell S. Frye, Paul W. Casper Jr.,

Aug, p 28-29
PCB Regulations: Their Effect on the Foundry
Industry

Russell S. Frye, May, p 21-23

## POURING

Holding and Pouring of Magnesium-Treated Cast Iron Erwin Dotsch, Werner Mainz, Mar, p 24-26 The Reduction of Inclusions in Aluminum by Filtration

D. E. Groteke, Apr, p 25-27

#### PREHEATING

Fluidized Bed Heat Treating and Its Applications in the Foundry Carol A. Girrell, Dec, p 26-28 PROCESS CONTROL

Corebox Rigging for the Coldbox Process Richard M. Ovestrud, Sep, p 34-37

Curing Materials and Equipment for the Coldbox Process Richard M. Ovestrud, Oct. p 38-40

Improving Cleaning Room Productivity Norris Luther, Aug, p 17-22

KMS: A Proven Approach to Process Control David P. Kanicki, Mar. p 32

Kulp Foundry Finding Success with Ductile Iron Rogert L. Hachtman Jr., Oct, p 24-27

Quality Through Testing Part 1 - Sand Robin Bailey, Jun p 19-22

Statistical Quality Control in the Foundry -Part 2 Archibald Jamieson, Jun, p 23-25

Waukesha's Investment Casting Plant Forecasts Future of Foundry Industry Sep. p 25-27

#### PROCESS OF THE MONTH

Centralized Ladle Heating System Planned for Foundry Industry

Cryogenics Pays Off in Foundry Operations Aug. p 48C

New Vessel Adds to IMT's HIPping Capabilities Oct, p 55A

#### PRODUCT OF THE MONTH

Aluminum Pump Designed for Permanent Mold Foundries Mar, p 38C

Aluminum Thermal Analysis Unit Permits Grain Refinement Monitoring Aug, p 49

Breakthrough in Maintenance Management Jul, p 53A

Convey Liquid Aluminum with Induction Pumps Aug, p 48A

Core Finisher Machine Eliminates Core Fins Dec, p 46B

Digital System Assures Accurate Bath Temp Reading Jul. p 55A

Fixturing Concept Allows On-Line Casting Inspection Oct. p 55

Glasses Magnetically Divert Ferrous Dust Aug. p 48

High Pressure Water: One Method for Cleaning Castings Feb, p 35

Hot Isostatic Presses Designed for High Productivity

Aug, p 48B Improved Heat Release with New Insulation/ **Heating Modules** 

Jul, p 54A Instrument Measures Hydrogen in Aluminum Jun, p 54A

King Tester Introduces Redesigned Hardness

Testers Jul. p 54

Ladle Injection System Designed for Foundries Jan. p 30B

Manipulators Enable Eljer to Improve Efficiency, Quality Sep, p 56B

Microprocessor Control Added to Fluidized Bed **Furnace Line** Jun, p 54B

New Copper-Base Alloy Provides Lower Lead Jul. p 55

New Copper-Base Alloy Provides Lower Lead Levels Sep, p 56

New Pressure Sealed Ladle by Modern Jun, p 54A

New Reclaimer Unit Combines Shakeout. Reclaim, Classifying Jul. p 54B

New Spectrometer Provides Production Floor Analyses Dec, p 46A

New Stalk-Tubes for Low Pressure Casting Can Replace Iron Tubes Mar. p 38B

New Tilt-Top Furnace Design Available for Heat Treating Oct, p 55B

Pangborn Introducing Two New Sand Reclamation Units Sep, p 56A

Programmable Controller Added to Molding Machines

SSK Offering New C&D Rotary Flaskless Unit Feb. p 35B

Safety Aids Available for Noise Protection Programs Oct. p 55C

ShockStop Glove Absorbs Pounding from Impact Tools Dec. p 46

Summit Foundry Systems Offers Hydraulic Mold Punchout

Apr. p 52C Superior Graphite Completes Trial Run for Continuous Production of Silicon Carbide Nov. p 166A

Table Top Electric Furnace Offers Versatility in Melting Apr, p 52B

Thermal Reclaimers Reduce Sand Disposal **Problems** Mar. p 38

Universal Castings Installs Electrically Heated Ladle Jan, p 30A

Urethane System Reduces Cost of Foundry Jan. p 30

The Vaclaim System: A New Twist in Reclamation Aug. p 50

## PRODUCTION CONTROL

Consight/Magsight William E. Willis, Sep, p 18-20

Getting an I.E. Program Started in Your

D. P. Henry, Jan, p 22-24
The Industrial Engineer's Role in Justifying Capital Expenditures

Donald J. Huss, Apr, p 28-30 Industrial Engineering Applications in the Foundry Organization

D. J. Gentile, Feb, p 22-24 Microcomputers and Programs for Foundry Calculations

Rudolf Sillen, Aug, p 35-37

Microprocessor Control Added to Fluidized Bed Furnace Line Jun, p 54B

Pacific Southern Foundries: "Building In" **Casting Quality** Stan Blomberg, Jul, p 14-17

The Role of the Industrial Engineer in the **Decades Ahead** C. A. Brautigam, D. P. Brautigam,

May, p 27-30 Spheroidizing Treatment for Ductile Iron Jun, p 32-33

Statistical Quality Control in the Foundry -Part 1

Archibald Jamieson, May, p 18-20 Statistical Quality Control in the Foundry Part 2 Archibald Jamieson, Jun. p 23-25

#### PROPERTIES

Charge Materials for Ductile Iron Apr, p 32A

#### PUBLICATIONS PROFILE

KMS: A Proven Approach to Process Control David P. Kanicki, Mar. p 32

#### QUALITY CONTROL

Are There Limits to Quality? David P. Kanicki, Mar, p 17 **British Trends in Heat Treatment** Eric Ford, May, p 35-36

Casting Quality Starts With Quality Patterns Jul. p 26-27

Charge Materials for Ductile Iron Apr, p 32A

Green Sand Molding: A Review for the Future Robin Bailey, May, p 31-34

.

Green Sand Reclamation Considered Growing lesue

Jul. p 28-29 Improving Cleaning Room Productivity Norris Luther, Aug, p 17-22

KMS: A Proven Approach to Process Control David P. Kanicki, Mar, p 32

Pacific Southern Foundries: "Building In" **Casting Quality** 

Stan Blomberg, Jul, p 14-17 Quality Through Testing Part 1 – Sand Robin Bailey, Jun, p 19-22

Quality Through Testing Part 2 - Metal D. P. Kanicki, E. L. Kotzin, R. W. Lobenhofer, Jul. p 18-21

Quality Through Testing Part 3 – Metal D. P. Kanicki, E. L. Kotzin, R. W. Lobenhofer, Aug, p 23-25

Quality at Lynchburg: A Way of Life William S. Williams, Apr. p 18-21

The Reduction of Inclusions in Aluminum by Filtration

D. E. Groteke, Apr, p 25-27 The Role of the Industrial Engineer in the

**Decades Ahead** C. A. Brautigam, D. P. Brautigam, May, p 27-30

Statistical Quality Control in the Foundry -Part 1

Archibald Jamieson, May, p 18-20 Statistical Quality Control in the Foundry -Part 2

Archibald Jamieson, Jun, p 23-25 Trends in Foundry Purchasing Management Robin Bailey, Nov. p 48-49

Waukesha's Investment Casting Plant Forecasts Future of Foundry Industry Sep, p 25-27

**RECLAMATION (See Also Specific Type)** Reclaiming Clay Bonded Sand for Coreroom

Mark Ruzbehi, Dieter S. Leidel, Sep. p 21-24 Reclaiming Sodium Silicate Bonded Sand at **Brea Alloys** 

Ken Shahan, Tom Cobett, Mar, p 30-31 Thermal Reclaimers Reduce Sand Disposal Problems

Mar, p 38 The Vaclaim System: A New Twist in Reclamation

Aug, p 50

## REFRACTORIES

**AOD Refractory Performance at Wisconsin** Centrifugal D. A. Whitworth, E. A. Hall, Jan, p 25-27

AOD and Refractories are Major Interests for Steel Casting Producers

Aug, p 40-41

**Dry Vibrated Linings for Induction Melting** Ronald A. Stark, Nov. p 38-40 New Stalk-Tubes for Low Pressure Casting Can

Replace Iron Tubes Mar, p 38B

#### **RESEARCH PATRONS**

Asbury Carbons: Gearing Up for the Cast Metals Industry of Tomorrow May, p 39

Miller and Company: Where It Stands Today Nov. p 32

Casting Congress Technical Review Part 1 Jun, p 37-39

Foundry Rersearch Stresses Advanced **Computer Techniques** Jul, p 27-28

The Function of Risers and Chills in Casting Aluminum Nov, p 54

Improving Cleaning Room Productivity Norris Luther, Aug, p 17-22

#### SAFETY & HEALTH

Glasses Magnetically Divert Ferrous Dust Aug, p 48

Is an Industrial Hygiene Program Cost Effective? Nov, p 51-52

Maintenance Troubleshooting Job Safety **Analysis** Sep, p 43-44

New Copper-Base Alloy Provides Lower Lead Levels Sep, p 56

Protecting Your Foundry from Fire Oct, p 45

Safety Aids Available for Noise Protection **Programs** Oct, p 55C

ShockStop Glove Absorbs Pounding from Impact Tools Dec, p 46

Vibration White Finger Dec, p 38

SAND BINDERS (See Also Specific Type)
Impact Molding: A New Concept in Green Sand Compaction

Donald J. Berant, Sep, p 28-29 Reclaiming Sodium Silicate Bonded Sand at Brea Alloys

Ken Shahan, Tom Cobett, Mar, p 30-31

SAND PREPARATION

Green Sand Molding: A Review for the Future Robin Bailey, May, p 31-34

#### SAND PROPERTIES

Green Sand Molding: A Review for the Future Robin Bailey, May, p 31-34 Quality Through Testing Part 1 - Sand Robin Bailey, Jun, p 19-22

SAND RECLAMATION & RECYCLING

An Economical Approach to Sand Reclamation John H. Morgan, Peter E. Macler, Feb, p 19-21

Green Sand Reclamation Considered Growing Issue

Jul, p 28-29 New Reclaimer Unit Combines Shakeout, Reclaim, Classifying Jul, p 54B

Pangborn Introducing Two New Sand **Reclamation Units** Sep, p 56A

Reclaming Clay Bonded Sand for Coreroom Mark Ruzbehi, Dieter S. Leidel, Sep, p 21-24

#### SAND SYSTEMS

Computerized Sand Control Gary R. Strong, Mar, p 18-21 Green Sand Molding: A Review for the Future Robin Bailey, May, p 31-34

Lake Shore Foundry Takes the Gamble Robin Bailey, Sep, p 30-31

Reclaiming Clay Bonded Sand for Coreroom

Mark Ruzbehi, Dieter S. Leidel, Sep, p 21-24

#### SAND TESTING & CONTROL

Computerized Sand Control Gary R. Strong, Mar, p 18-21 An Economical Approach to Sand Reclamation John H. Morgan, Peter E. Macler, Feb, p 19-21

Quality Through Testing Part 1 - Sand Robin Bailey, Jun, p 19-22

#### SCRAP

1982 Flow of Iron in the U.S.A. Dec, p 32-33 **Desirable Physical Characteristics for Cupola** Scrap

Dec. p 39

The Status of Critical Foundry Materials - 1983 Jun, p 26-28

#### SHAKEOUT

New Reclaimer Unit Combines Shakeout, Reclaim, Classifying Jul, p 54B

Recent Developments in Casting Extraction Michael J. DeLuca, Frerd Degner, Nov, p 34-37

#### SHELL MOLDS & MOLDING

Automatic Counter Gravity Casting of Shell Molds G. D. Chandley, Oct, p 29-31

## SLAG

**AOD Refractory Performance at Wisconsin** Centrifugal D. A. Whitworth, E. A. Hall, Jan, p 25-27 Base Iron Preparation for Ductile Iron May, p 37-38 **Desulfurizing Acid and Basic Steels** Nick Wukovich, Oct, p 34-37 Desulfurizing Acid and Basic Steel

#### SLAG METAL REACTIONS

Nick Wukovich, Sep, p 38-41

**AOD Refractory Performance at Wisconsin** Centrifugal D. A. Whitworth, E. A. Hall, Jan, p 25-27

#### SODIUM SILICATE BINDERS

Reclaiming Sodium Silicate Bonded Sand at **Brea Alloys** Ken Shahan, Tom Cobett, Mar, p 30-31

#### SOLIDIFICATION

The Function of Risers and Chills in Casting Aluminum Nov, p 54 Research Investigating Alloying Elements

Aug, p 43-44

Researchers Taking Close Look at CG Iron Aug, p 45

## SPECTROGRAPHIC ANALYSIS

**New Spectrometer Provides Production Floor Analyses** Dec, p 46A

#### STEEL

Dec, p 32-33

17th Census of World Casting Production -Dec, p 22-23 1982 Flow of Iron in the U.S.A.

**AOD Refractory Performance at Wisconsin** Centrifugal

D. A. Whitworth, E. A. Hall, Jan, p 25-27 AOD and Refractories are Major Interests for Steel Casting Producers Aug, p 40-41

Casting Congress Technical Review Part 3 Aug, p 40

**Desulfurizing Acid and Basic Steels** Nick Wukovich, Oct, p 34-37 Desulfurizing Acid and Basic Steel Nick Wukovich, Sep, p 38-41

Developments in Arc Furnace Melting John W. Wasem, Feb, p 16-18

A Process for Deoxidizing Acid Melted Carbon Steel Lev Gindin, Mar, p 27-29

Quality Through Testing Part 2 - Metal D. P. Kanicki, E. L. Kotzin, R. W. Lobenhofer, Jul, p 18-21

#### STEEL ALLOYS

**AOD Refractory Performance at Wisconsin** Centrifugal D. A. Whitworth, E. A. Hall, Jan, p 25-27 The Status of Critical Foundry Materials - 1983 Jun. p 26-28

#### STEEL DEOXIDIZING

A Process for Deoxidizing Acid Melted Carbon Steel Lev Gindin, Mar, p 27-29

## **TECHNICAL ABSTRACTS**

Air Force Targets Aluminum Castings for Structural Parts Jun. p 39-40

Cupro-Nickel Casting Results from Innovative Design

**Development of Foundry Computer Based** Systems Continuing Jun, p 40-41

## **TESTING & CONTROL**

Air Force Targets Aluminum Castings for Structural Parts Jun, p 39-40

Casting Congress Technical Review Part 1 Jun, p 37-39 Computerized Sand Control

Gary R. Strong, Mar, p 18-21 **Detecting Hydrogen Gas in Aluminum** Lawrence P. Semersky, Aug, p 38-39

Digital System Assures Accurate Bath Temp Reading Jul, p 55A

Environmental Issues Remain a Major Industry Concern

Aug, p 42-43 Fixturing Concept Allows On-Line Casting Inspection

Oct, p 55 Instrument Measures Hydrogen in Aluminum Jun, p 54A

King Tester Introduces Redesigned Hardness Testers Jul. p 54

New Thermal Analysis Instrument Aids Casting Procedures Nov, p 166

Quality Through Testing Part 1 – Sand Robin Bailey, Jun, p 19-22

Quality Through Testing Part 2 – Metal D. P. Kanicki, E. L. Kotzin, R. W. Lobenhofer, Jul, p 18-21

Quality Through Testing Part 3 – Metal D. P. Kanicki, E. L. Kotzin, R. W. Lobenhofer, Aug, p 23-25

Statistical Quality Control in the Foundry – Part 1

Archibald Jamieson, May, p 18-20 Statistical Quality Control in the Foundry – Part 2

Archibald Jamieson, Jun p 23-25

A Technique for Retaining Graphite in Cast Irons During Polishing W. U. Ahmed, L. J. Gawlick, Jan, p 20-21

Waukesha's Investment Casting Plant Forecasts Future of Foundry Industry Sep, p 25-27

#### THERMAL ANALYSIS

Aluminum Thermal Analysis Unit Permits Grain Refinement Monitoring Aug, p 49

Casting Congress Technical Review Part 1 Jun, p 37-39

New Thermal Analysis Instrument Aids Casting Procedures Nov. p 166

Quality Through Testing Part 2 – Metal D. P. Kanicki, E. L. Kotzin, R. W. Lobenhofer, Jul, p 18-21

#### TRADE ASSOCIATION NEWS

1983 Turnaround Seen for U.S. Foundry Industry Jan, p 10

**CCMA Holds Annual Meeting** 

Sep, p 16A Canadian Foundry Association Sees Growth Pattern for Remainder of '80s

Nov, p 26B-27 Collective Bargaining in the 80's Marked by Survival and Recovery

Apr, p 10 Confidence Needed to End Durable Goods Recession

May, p 10 Diecasting CEOs Review Business Strategies Apr, p 11

Economic Upturn Unmistakable Says ICS Sep, p 17

FAM Conference Stresses Business Climate in Michigan Jul, p 8

FEF Presents Ten Scholarship Awards Feb, p 9

FSMG Holds Annual Meeting Dec, p 15A

FSMG Looks to Technology Exchange Oct, p 16A

Future is Bright as Diecasting Sales Rise Nov, p 26A

Little Letup Expected in Growing Tide of Imported Castings May, p 8

Metalcasters Examine Survival Techniques Jun, p 9

NFA Officer Nominations Submitted to Membership Oct, p 16B

NFFS Annual Meeting: New Beginnings for Society and Industry Dec, p 14-15 New Titanium Industry Association Formed Nov, p 26

Society Celebrates Silver Anniversary Aug, p 8-9

Steel Founders Gear for Productivity Boost Sep, p 16

Steel Founders Urged to Improve Quality or Lose Markets Jan, p 11

Steel Founders' Host International Delegates Oct, p 16C

Steel Founders' Offer Up-to-Date Technology Dec, p 15

Steel Foundries Coming to Grips with Permanent Structural Change Nov, p 20-25

Technology Transfer Key to Diecasting Success Oct. p 16

#### TRENDS & RESEARCH

Quality at Lynchburg: A Way of Life William S. Williams, Apr, p 18-21 Trends in Foundry Purchasing Management Robin Bailey, Nov, p 48-49

#### TRENDS PANEL REPORTS

1983: An Economic Shell Game David P. Kanicki, Jan, p 16-19

#### **V-PROCESS**

Duraloy Blaw-Knox Installs V-Process Molding System Apr, p 52A

#### **VACUUM DEGASSING**

Curing Materials and Equipment for the Coldbox Process Richard M. Ovestrud, Oct, p 38-40

## WATER POLLUTION CONTROL

Zero Discharge: The Next Environmental Hurdle Martha Siebel, Aug, p 32-34

#### WEAR RESISTANCE

Cryogenics Pays Off in Foundry Operations Aug, p 48C

The HMP System: A New Idea in Patternmaking Robin Bailey, Jul, p 22-23

Metallic Coatings for Patterns and Coreboxes J. R. Henry, Apr, p 22-24

Quality Through Testing Part 3 – Metal D. P. Kanicki, E. L. Kotzin, R. W. Lobenhofer, Aug, p 23-25

#### ZINC

Foundry Bucks Recession by Capitalizing on Zinc Casting Alloy Jul, p 53

## ZIRCONIUM

A Process for Deoxidizing Acid Melted Carbon Steel Lev Gindin, Mar, p 27-29

# OF ARTICLES

AFS Board Takes Action on Society Management Sep, p 13

AOD Refractory Performance at Wisconsin Centrifugal D. A. Whitworth, E. A. Hall, Jan, p 25-27

AOD and Refractories are Major Interests for Steel Casting Producers Aug, p 40-41 Air Force Targets Aluminum Castings for Structural Parts Jun, p 39-40

Aluminum Pump Designed for Permanent Mold Foundries Mar, p 38C

Aluminum Thermal Analyzis Unit Permits Grain Refinement Monitoring Aug, p 49

The Annualing of Cast Iron Sep, p 46-47

Are There Limits to Quality? David P. Kanicki, Mar, p 17

Asbury Carbons: Gearing Up for the Cast Metals Industry of Tomorrow May, p 39

Automated Design of Solid Components Ernest Mazzatenta, Sep, p 32-33

Automatic Counter Gravity Casting of Shell Molds

G. D. Chandley, Oct, p 29-31

Avoiding Damage Suits From Employee Terminations

Matthew Goodfellow, Aug, p 30-31

Base Iron Preparation for Ductile Iron May, p 37-38 Brea Alloys' Reclamation Unit

Brea Alloys: Heclamation Unit
Mar, p 31
Breakthrough in Maintenance Management

Jul, p 53Å British Trends in Heat Treatment Eric Ford, May, p 35-36

C CCMA Holds Annual Meeting Sep, p 16A

Canadian Foundry Association Sees Growth Pattern for Remainder of '80s Nov, p 26B-27

Canadian Foundrymen Emphasize People, Productivity and Profit Dec, p 41

Casting Congress Technical Review Part 1 Jun, p 37-39

Casting Congress Technical Review Part 2 Jul, p 26

Casting Congress Technical Review Part 3
Aug, p 40

Casting Quality Starts With Quality Patterns Jul, p 26-27

Castings Facing Slow Comeback; Foundry Equipment Down Again Robert A. Ricciuti, Feb, p 25-27

Centralized Ladle Heating System Planned for Foundry Industry Apr, p 52

Charge Materials for Ductile Iron Apr, p 32A

The Cleaning of Pattern Tooling: Benefit or Evil William G. Gabelhausen, Dec, p 29-31 Coldshell Cores Make Debut at Hayes-Albion

David P. Kanicki, Jul, p 24-25
Collective Bargaining in the 80's Marked by

Survival and Recovery
Apr, p 10

Computer Simulation Reveals Maintenance Efficiencies Aug, p 41

Computerized Sand Control Gary R. Strong, Mar, p 18-21

Conference Prepares Foundrymen for Industry Comeback

Comeback Apr, p 46 Confidence Needed to End Durable Goods Recession

May, p 10 Consight/Magsight William E. Willis, Sep, p 18-20

Consultants and Their Use **Fixturing Concept Allows On-Line Casting** It's Time to Help Ourselves Marvin Schwenzer, Jul, p 30-32 Inspection David P. Kanicki, Aug, p 15 Convey Liquid Aluminum With Induction Pumps Oct, p 55 Aug, p 48A Fluidized Bed Heat Treating and Its Applications in the Foundry Carol A. Girrell, Dec, p 26-28 Core Finisher Machine Eliminates Core Fins Just a Gut Feeling Dec, p 46B David P. Kanicki, Oct, p7 Forecasting the Ductile Iron Industry Corebox Rigging for the Coldbox Process Richard M. Ovestrud, Sep, p 34-37 Real Gratton, Oct, p 20-23 Cryogenics Pays Off in Foundry Operations Foundry Bucks Recession by Capitalizing on KMS: A Proven Approach to Process Control David P. Kanicki, Mar, p 32 Aug, p 48C Zinc Casting Alloy Cupola Melters Taking a Hard Look at Coke Jul, p 53 King Tester Introduces Redesigned Hardness Foundry Research Stresses Advanced Computer Techniques and Costs Testers Aug, p 44-45 Cupro-Nickel Casting Results from Innovative Jul, p 54 Jul, p 27-28 Kulp Foundry Finding Success with Ductile Iron Robert L. Hachtman Jr., Oct, p 24-27 Design Foundrymen Look to Advanced Technology Jun, p 34-36 Jun, p 41 \$4 Million Baghouse Goes On-Line at Deere Curing Materials and Equipment for the Coldbox Process Jan, p 30C Ladle Injection System Designed for Foundries Richard M. Ovestrud, Oct, p 38-40 The Function of Risers and Chills in Casting Jan, p 30B Aluminum Lake Shore Foundry Takes the Gamble Robin Bailey, Sep, p 30-31 Nov. p 54 Desirable Physical Characteristics for Cupola Future is Bright as Diecasting Sales Rise Little Letup Expected in Growing Tide of Scrap Nov, p 26A Imported Castings Dec, p 39 May, p8 **Desulfurizing Acid and Basic Steels** Nick Wukovich, Oct, p 34-37 Getting an I.E. Program Started in Your Desulfurizing Acid and Basic Steel MC and Our Changing Industry Foundry Nick Wukovich, Sep, p 38-41 Detecting Hydrogen Gas in Aluminum D. P. Henry, Jan, p 22-24 David P. Kanicki, Sep, p 7 A Giant Step for Fair Trade Maintenance Troubleshooting Job Safety Lawrence P. Semersky, Aug, p 38-39 David P. Kanicki, Jul, p 13 **Analysis Development of Foundry Computer Based** Glasses Magnetically Divert Ferrous Dust Sep, p 43-44 Systems Continuing Jun, p 40-41 Aug, p 48 Manipulators Enable Eljer to Improve Efficiency, Green Sand Molding: A Review for the Future **Developments in Arc Furnace Melting** Robin Bailey, May, p 31-34 Green Sand Reclamation Considered Growing Sep, p 56B John W. Wasem, Feb, p 16-18 Metalcasters Examine Survival Techniques **Diecasting CEOs Review Business Strategies** Issue Jun, p9 Apr, p 11 Metallic Coatings for Patterns and Coreboxes J. R. Henry, Apr, p 22-24 Jul, p 28-29 Digital System Assures Accurate Bath Temp Reading Microcomputers and Programs for Foundry Jul, p 55A The HMP System: A New Idea in Calculations Disamatics, Key to Three Modernization Patternmaking Rudolf Sillen, Aug,. p 35-37 Robin Bailey, Jul, p 22-23 High Pressure Water: One Method for Cleaning **Programs** Microprocessor Control Added to Fluidized Bed Feb, p 35A **Furnace Line** Dry Vibrated Linings for Induction Melting Ronald A. Stark, Nov, p 38-40 Castings Jun, p 54B Feb, p 35 Miller and Company: Where It Stands Today **Ductile Iron Inoculation Practice** Holding and Pouring of Magnesium-Treated Nov, p 32 Jul, p 49 Cast Iron **Duraloy Blaw-Knox Installs V-Process Molding** Erwin Dotsch, Werner Mainz, Mar p 24-26 System Hot Isostatic Presses Designed for High **NE Casters Encouraged to Improve Practices** Apr, p 52A **Productivity** Despite Uncertain Economy Aug, p 48B Feb, p 32 NFA Officer Nominations Submitted to Economic Upturn Unmistakable Says ICS Impact Molding: A New Concept in Green Sand Membership Sep, p 17 Compaction Oct, p 16B An Economical Approach to Sand Reclamation Donald J. Berant, Sep, p 28-29 NFFS Annual Meeting: New Beginnings for John H. Morgan, Peter E. Macler, Improved Heat Release with New Insulation/ Society and Industry Feb, p 19-21 **Heating Modules** Dec, p 14-15 Egypt Beckons Foundrymen Jul. p 54A New Copper-Base Alloy Provides Lower Lead Aug, p 12 Improving Casting Properties and Integrity with Levels Environmental Issues Remain a Major Industry Hot Isostatic Processing Jul. p 55 Concern E. L. Rooy, Dec, p 18-20 New Copper-Base Alloy Provides Lower Lead Aug, p 42-43 Improving Cleaning Room Productivity Levels **Environmental Permitting and Its Effect on Plant** Norris Luther, Aug, p 17-22 Sep, p 56 Shutdowns The Industrial Engineer's Role in Justifying New Pressure Sealed Ladle by Modern Russell S. Frye, Paul W. Casper Jr., Capital Expenditures Jun, P 54A Aug, p 28-29 Donald J. Huss, Apr, p 28-30 New Reclaimer Unit Combines Shakeout. Reclaim, Classifying Industrial Engineering Applications in the Foundry Organization Jul, p 54B D. J. Gentile, Feb, p 22-24 **New Spectrometer Provides Production Floor** FAM Conference Stresses Business Climate in Industrial Engineering in Large Foundry **Analyses** Michigan **Organizations** Dec, p 46A Jul, p8 Charles Wargel, Mar, p 22-23 New Stalk-Tr bes for Low Pressure Casting Can FEF Presents Ten Scholarship Awards Industry Issues Focus of 87th Casting Replace Iron Tubes Feb, p9 Congress Mar, p 38B **FSMG Holds Annual Meeting** Mar, p 10 New Thermal Analysis Instrument Aids Casting Instrument Measures Hydrogen in Aluminum Dec, p 15A FSMG Looks to Technology Exchange Jun, p 54A Nov. p 166 Oct, p 16A Is an Industrial Hygiene Program Cost New Tilt-Top Furnace Design Available for Heat Factors Influencing Inoculation Effective? Treating Oct, p 48 Nov, p 51-52 Oct, p 55B

Robin Bailey, Nov, p 48-49 New Vessel Adds to IMT's HIPping Capabilities C. A. Brautigam, D. P. Brautigam, Oct, p 55A May, p 27-30 Understanding Shot Peening: A Case History 1983: An Economic Shell Game David P. Kanicki, Jan, p 16-19 Gregory A. Fett, Jun, p 29-31 1983 Directory of Metalcasting and Foundry SSK Offering New C&D Rotary Flaskless Unit Universal Castings Installs Electrically Heated Consultants Feb, p 35B Ladle Jul. p 1A-16A Safety Aids Available for Noise Protection Jan, p 30A 1983 Turnaround Seen for U.S. Foundry **Programs Urethane System Reduces Cost of Foundry** Oct, p 55C Patterns Industry Jan, p 10 Scrubbing Cupola Gases with Increased Jan, p 30 Using Coated Abrasive Belts in High Pressure 1982 Flow of Iron in the U.S.A. Efficiency Dec, p 32-33 **Grinding Applications** F. M. Degner, Dec, p 24-25 1984 Buyers' Guide Issue Anthony Russo, May, p 24-26 17th Census of World Casting Production-1982 Nov, p 1BD-104 Dec, p 22-23 The Vaclaim System: A New Twist in ShockStop Glove Absorbs Pounding from Reclamation Optimism and Faith in the Future Expressed by Impact Tools Aug, p 50 Foundrymen Dec, p 46 Vibration White Finger May, p 40 Small Foundry Prepares for the Future Dec, p 38 Robin Bailey, Aug, p 26-27 Smokestacks and the Credibility Gap . Or Forever Hold Your Peace David P. Kanicki, Feb, p 15 David P. Kanicki, May, p 17 Society Celebrates Silver Anniversary Waukesha's Investment Casting Plant Forecasts Future of Foundry Industry PCB Regulations: Their Effect on the Foundry Aug, p 8-9 Sep, p 25-27 Industry Some Thoughts for 1983 What Business are You In? Russell S. Frye, May, p 21-23 David P. Kanicki, Jan, p 15 David P. Kanicki, Apr, p 17 Pacific Southern Foundries: "Building In" Southeastern Chapters Hold 51st Consecutive What Every Foundryman Needs to Know About **Casting Quality** Conference Computers Part 1 Stan Blomberg, Jul, p 14-17 Mar, p 34 Dr. R. M. Kotschi, M. L. Kotschi, Oct, p 41-43 Pangborn Introducing Two New Sand Southern Foundries Find Flexibility with What Every Foundryman Needs to Know About **Reclamation Units** Coreless Melters Computers Part 2 May, p 44-45 Sep, p 56A Dr. R. M. Kotschi, M. L. Kotschi, Nov, p 44-47 Plastic Patterns for High Pressure Molding Spheroidizing Treatment for Ductile Iron What Every Foundryman Needs to Know About Roger Brown, Nov, p 41-43 Jun, p 32-33 Computers Part 3 Polyurethane Patterns Cut Costs for George The State of AFS and the Industry Dr. Ronald M. Kotschi, Dec, p 34-37 Eugene E. Paul, Jun, p 17-18 Fischer Mar, p 38A Statistical Quality Control in the Foundry -X, Y, Z Preparing Today for Tomorrow's Foundry Part 1 You Can't Get There from Here Apr, p 33-34 Archibald Jamieson, May, p 18-20 David P. Kanicki, Dec, p 7 Principles of Centrifugal Blast Machines Statistical Quality Control in the Foundry -Zero Discharge: The Next Environmental Eugene Tarabek, Feb, p 28-30 Hurdle A Process for Deoxidizing Acid Melted Carbon Archibald Jamieson, Jun, p 23-25 Martha Siebel, Aug, p 32-34 Steel The Status of Critical Foundry Materials - 1983 **AUTHORS** Lev Gindin, Mar, p 27-29 Jun, p 26-28 Programmable Controller Added to Molding Steel Founders Gear for Productivity Boost Ahmed, W. U./Gawlick, L. J. Machines Sep, p 16 A Technique for Retaining Graphite in Cast Jun, p 54D Steel Founders Urged to Improve Quality or Irons During Polishing (Jan, p 20-21) Protecting Your Foundry from Fire Lose Markets Oct, p 45 Jan, p 11 Steel Founders' Host International Delegates Bailey, Robin Quality Through Testing Part 1 - Sand Oct. p 16C Green Sand Molding: A Review for the Future Steel Founders' Offer Up-to-Date Technology Robin Bailey, Jun, p 19-22 (May, p 31-34) Dec, p 15 Quality Through Testing Part 2 - Metal The HMP System: A New Idea in Steel Foundries Coming to Grips with D. P. Kanicki, E. L. Kotzin, R. W. Lobenhofer, Patternmaking (Jul, p 22-23) Permanent Structural Change Jul, p 18-21 Lake Shore Foundry Takes the Gamble Nov, p 20-25 Quality Through Testing Part 3 - Metal (Sep, p 30-31) Summit Foundry Systems Offers Hydraui. D. P. Kanicki, E. L. Kotzin, R. W. Lobenhofer, Quality Through Testing Part 1 - Sand **Mold Punchout** Aug, p 23-25 (Jun, p 19-22) Apr, p 52C Quality at Lynchburg: A Way of Life Small Foundry Prepares for the Future Superior Graphite Completes Trial Run for William S. Williams, Apr, p 18-21 (Aug, p 26-27) Continuous Production of Silicon Carbide Trends in Foundry Purchasing Management Nov, p 166A Recent Developments in Casting Extraction Michael J. DeLuca, Fred Degner, (Nov, p 48-49) Berant, Donald J Nov, p 34-37 Table Top Electric Furnace Ofiers Versatility in Impact Molding: A New Concept in Green Sand Compaction (Sep, p 28-29) Reclaiming Clay Bonded Sand for Coreroom Melting Apr, p 52B Blomberg, Stan Mark Ruzbehi, Deter S. Leidel, Sep. p 21-24 A Technique for Retaining Graphite in Cast Pacific Southern Foundries: "Building In" Reclaiming Sodium Silicate Bonded Sand at Irons During Polishing Casting Quality (Jul, p 14-17 **Brea Alloys** W. U. Ahmed, L. J. Gawlick, Jan, p 20-21 Brautigam, C. A./Brautigam, D. P. Ken Shahan, Tom Cobett, Mar, p 30-31 **Technology Transfer Key to Diecasting** The Role of the Industrial Engineer in the The Reduction of Inclusions in Aluminum by Success Decades Ahead (May, p 27-30) Brautigam, D. P./Brautigam, C. A Oct, p 16 D. E. Groteke, Apr, p 25-27 Thermal Reclaimers Reduce Sand Disposal The Role of the Industrial Engineer in the Research Investigating Alloying Elements **Problems** Decades Ahead (May, p 27-30) Aug, p 43-44 Mar, p 38 Brown, Roger Researchers Taking Close Look at CG Iron The Tough Road Back Plastic Patterns for High Pressure Molding

David P. Kanicki, Nov. p 7

(Nov, p 41-43)

The Role of the Industrial Engineer in the

Decades Ahead

Trends in Foundry Purchasing Management

**New Titanium Industry Association Formed** 

Nov. p 26

Aug, p 45

Huss, Donald J. An Economical Approach to Sand The Industrial Engineer's Role in Justifying Reclamation (Feb, p 19-21) Casper Jr., Paul W./Frye, Russell S. Environmental Fermitting and Its Effect on Capital Expenditures (Apr, p 28-30) Plant Shutdowns (Aug, p 28-29) Ovestrud, Richard M. Chandley, G. D. Jamieson, Archibald Corebox Rigging for the Coldbox Process Statistical Quality Control in the Foundry – Part 1 (May, p 18-20) **Automatic Counter Gravity Casting of Shell** (Sep, p 34-37) Molds (Oct, p 29-31) Curing Materials and Equipment for the Cobett, Tom/Shahan, Ken Statistical Quality Control in the Foundry -Coldbox Process (Oct, p 38-40) Reclaiming Sodium Silicate Bonded Sand at Brea Alloys (Mar, p 30-31) Part 2 (Jun, p 23-25) Paul, Eugene E.
The State of AFS and the Industry Kanicki, D. P./Kotzin, E. L./Lobenhofer, R. W. DeLuca, Michael J./Degner, Fred Recent Developments in Casting Extraction Quality Through Testing Part 2 - Metal (Jun, p 17-18) (Jul, p 18-21) (Nov, p 34-37) Quality Through Testing Part 3 - Metal Degner, F. M (Aug, p 23-25) Kanicki, David P Scrubbing Cupola Gases with Increased Ricciuti, Robert A. Efficiency (Dec, p 24-25)
Degner, Fred/DeLuca, Michael J. ... Or Forever Hold Your Peace (Feb, p 15) 1983: An Economic Shell Game Castings Facing Slow Comeback; Foundry Equipment Down Again (Feb, p 25-27) Recent Developments in Casting Extraction (Jan, p 16-19) Rooy, E. L. Improving Casting Properties and Integrity (Nov, p 34-37) Are There Limits to Quality? (Mar, p 17) Dotsch, Erwin/Mainz, Werner Coldshell Cores Make Debut at Hayes-Albion with Hot Isostatic Processing (Dec, p 18-20) Holding and Pouring of Magnesium-Treated Russo, Anthony (Jul, p 24-25) Cast Iron (Mar, p 24-26) A Giant Step for Fair Trade (Jul, p 13) Using Coated Abrasive Belts in High **Pressure Grinding Applications** It's Time to Help Ourselves (Aug, p 15) Just a Gut Feeling (Oct, p 7) (May, p 24-26) Fett, Gregory A.
Understanding Shot Peening: A Case History KMS: A Proven Approach to Process Control Ruzbehi, Mark/Leidel, Dieter S. (Mar, p 32) Reclaiming Clay Bonded Sand for Coreroom (Jun, p 29-31) MC and Our Changing Industry (Sep, p 7) Smokestacks and the Credibility Gap Use (Sep. p 21-24) Ford, Eric **British Trends in Heat Treatment** (May, p 35-36) (May, p 17) Frye, Russell S./Casper Jr., Paul W.
Environmental Permitting and Its Effect on Some Thoughts for 1983 (Jan, p 15) Schwenzer, Marvin The Tough Road Back (Nov, p 7) Consultants and Their Use (Jul. p 30-32) Plant Shutdowns (Aug, p 28-29) What Business are You In? (Apr, p 17) Semersky, Lawrence P. You Can't Get There from Here (Dec, p 7) Frye, Russell S. **Detecting Hydrogen Gas in Aluminum** PCB Regulations: Their Effect on the Kotschi, Dr. R. M./Kotschi, M. L. (Aug, p 38-39) Foundry Industry (May, p 21-23) What Every Foundryman Needs to Know Shahan, Ken/Cobett, Tom About Computers Part 1 (Oct, p 41-43) Reclaiming Sodium Silicate Bonded Sand at What Every Foundryman Needs to Know Brea Alloys (Mar, p 30-31) About Computers Part 2 (Nov, p 44-47) Gabelhausen, William G. Siebel, Martha Kotschi, Dr. Ronald M. The Cleaning of Pattern Tooling: Benefit or Zero Discharge: The Next Environmental What Every Foundryman Needs to Know About Computers Part 3 (Dec, p 34-37) Evil (Dec, p 29-31) Hurdle (Aug, p 32-34) Gawlick, L. J./Ahmed, W. U. Sillen, Rudolf A Technique for Retaining Graphite in Cast Kotschi, M. L./Kotschi, Dr. R. M. Microcomputers and Programs for Foundry Irons During Polishing (Jan, p 20-21) What Every Foundryman Needs to Know Calculations (Aug, p 35-37) Gentile, D. J. about Computers Part 1 (Oct, p 41-43) Stark, Ronald A. Industrial Engineering Applications in the What Every Foundryman Needs to Know Dry Vibrated Linings for Induction Melting Foundry Organization (Feb, p 22-24) About Computers Part 2 (Nov, p 44-47) (Nov, p 38-40) Gindin, Lev Kotzin, E. L./Kanicki, D. P./Lobenhofer, R. W. Strong, Gary R. A Process for Deoxidizing Acid Melted Quality Through Testing Part 2 - Metal Computerized Sand Control (Mar, p 18-21) Carbon Steel (Mar, p 27-29) Girrell, Carol A Quality Through Testing Part 3 - Metal Fluidized Bed Heat Treating and Its (Aug, p 23-25) Applications in the Foundry (Dec, p 26-28) Tarabek, Eugene Principles of Centrifugal Blast Machines Goodfellow, Matthew **Avoiding Damage Suits From Employee** (Feb, p 28-30) Leidel, Dieter S./Ruzbehi, Mark Terminations (Aug, p 30-31) Reclaiming Clay Bonded Sand for Coreroom Use (Sep, p 21-24) Lobenhofer, R. W./Kanicki, D. P./Kotzin, E. L. Gratton, Real Forecasting the Ductile Iron Industry Wargel, Charles (Oct, p 20-23) Quality Through Testing Part 2 - Metal Industrial Engineering in Large Foundry Groteke, D. E. (Jul. p 18-21) Organizations (Mar, p 22-23) The Reduction of Inclusions in Aluminum by Quality Through Testing Part 3 - Metal Wasem, John W. Filtration (Apr, p 25-27) (Aug, p 23-25) Developments in Arc Furnace Melting Luther, Norris (Feb, p 16-18) Improving Cleaning Room Productivity (Aug, p 17-22) Whitworth, D. A./Hall, E. A. Hachtman Jr., Robert L. **AOD Refractory Performance at Wisconsin** Kulp Foundry Finding Success with Ductile Centrifugal (Jan, p 25-27) Williams, William S. Iron (Oct, p 24-27) Macler, Peter E./Morgan, John H. An Economical Approach to Sand Hall, E. A./Whitworth, D. A. Quality at Lynchburg: A Way of Life Reclamation (Feb, p 19-21) **AOD Refractory Performance at Wisconsin** (Apr, p 18-21) Centrifugal (Jan, p 25-27) Mainz, Werner/Dotsch, Erwin Willis, William E. Henry, D. P. Holding and Pouring of Magnesium-Treated Consight/Magsight (Sep, p 18-20) Getting an I.E. Program Started in Your Cast Iron (Mar, p 24-26) Wukovich, Nick Foundry (Jan, p 22-24) Henry, J. R. Mazzatenta, Ernest Desulfurizing Acid and Basic Steel **Automated Design of Solid Components** (Sep, p 38-41)

(Sep, p 32-33)

Morgan, John H./Macler, Peter E.

Desulfurizing Acid and Basic Steels

(Oct, p 34-37)

Metallic Coatings for Patterns and Coreboxes

(Apr, p 22-24)

